1: Hocart Y-5 (ca. 1920) 1929 OQ6 Lau OQ6
Lakemba



# INDUSTRIES

## AGRICULTURE

### YAM GROWING

244

Yam planting was formerly done by "clan statute labor." One field would be planted by the village (*were vakoro*), one by each clan, one by each group of households (*vakavuvale*). For the field of Tui Naiau the whole of Lakemba joined in. If Navuaira did the digging, Natokalau would provide the food while their women got together manufactured articles for a race; or, vice versa. The digging party ran a race for the gifts, though without material reward, for the runners then went home and provided yams to plant; one, a person. The nobles had their field planted by one or two villages, their dependencies. The owner of the field made a feast (*otho* or *ngga ni laulau*) at various stages of the work. When the crops were mature, first fruits were ceremoniously offered.

[526]

[262]

Yams (*uvi*) are the staple food of Lau (Pl. II, *B*). The soil of Lakemba is especially suited to their cultivation. There are many kinds, identified by their shape and by the texture and color of the skin. The true indigenous yams of Lakemba are said to be the *kaumaile*, the *kasokaso*, and true *ndamuni*. The *kaumaile* is recognized as the longest yam and has many varieties—white (*kumaile vula*, *kaumaile hina*), the longest and best flavored; *kaumaile uli*, red inside, very stout; "the root of the breadfruit," long head and yellow flesh, color of head uneven. The *kasokaso*, recognized as the best flavored, and next in length to *kaumaile*, is noble (*turanga*). The varieties are: *wanu*, some rivalling the *kaumaile* in length and so sturdy that it sometimes flowers when the tuber is large and only when the plant is a good size; *tawake*, the next longest, has a small head; *lavelio* also called *maikeli* after Maikeli Mbaleingau of Levuka, a noted planter; the German *kasokaso*, said to be the same as the *lavelio* and to have been imported, two varieties, one white and thick with pale leaves; the other one is the longer.

[177]

242
244

A Lauan says:

> Dry and breezy soil is good for yams. Damp land is bad because of the breath of the water. It is bad if it is shut in because bad heat is in bad repute (*rongo tha*) with yams; the breath of the soil goes up, so it is either cold or excessively hot; cold is bad when it alternates with heat. Wet soil is bad because it is cold. Yams do well in hard soil; if they strike alluvial soil it is soft and cold. Soils differ according to the year. In a dry year true soil (*nggele ndina*) is best; but in a wet year yams do better in *rasca*, a reddish strong soil of which there is much near Tarukua. Shallow soil is fertile if rain falls; not so deep soil, possibly because of the cold; on

1: Hocart Y-5 (ca. 1920) 1929 OQ6 Lau OQ6
Lakemba



the other hand, shallow soil with soapstone underneath as in Ndevo, Naiau, is no good in a dry year. Various soils suit various yams; thus in Rasea some places are good for short yams, others for long; yams from Rasea have a nice taste.

Land is cleared from April till June, beginning with the following of the reeds; these months are called clearing months (*vula i werewere*). As yam fallows bear little besides reeds, all that is usually required is roughly to cut and beat down the reeds and fire them, taking care to clear thoroughly a broad avenue all round to prevent the fire from spreading; however, it frequently does spread, but usually spends itself on barren tracts. When the remaining stumps have been cleared away the digging begins.

Digging is done with a digging stick (*i ndoko*), a pole 5 to 7 feet long, levelled at one end. Thomson (14, p. 339) says it "does little credit to the inventive powers of the Fijians." I have experience of yam planting and can say that the digging stick is far better adapted to yam planting than a spade; in fact Lakembans object to spades because the soil is full of roots, and forks bend and do not have the leverage of a yam pole. That is why the Fijian, who is neither a fool nor stupidly conservative, keeps to his digging stick, unless he can get what he calls a German (*tiamani*), a narrow oval blade in a straight line with the dowel, which he fixes on the end of a digging stick.

Sometimes the whole soil is turned over, a process called *thuki vovo*: it is supposed sometimes to do the yams good. In Ono an experiment was made of turning up only part of a field, it was found that the yams were energetic in the soil that was not turned. The reason is that if the soil is turned the spaces between the mounds are hot in the sun, and cold in the rain.

As a rule planters are content with making mounds in the undug field. This work which is called *ndoko* is done by the young men because it is harder; they thrust the stick into the ground and lever up the earth; then they thrust it in the next spot and so on in a circle some two and a half feet or more in diameter. The older men break up the clods and gather the earth into a mound with their hands or with spades, an operation called *rava*. The mounds, *i pukepuke* are usually made on one day and the planting done on another day.

The chief months for yam planting are July and August; some kinds can be planted later, and planting goes on, decreasing in intensity, as late as November. Old men used to advise planting at full moon; then the yams would grow big. Seed yams are called *mbulambula*, from *mbula*, to grow; when planted, they are called *i tei* (set). Any part of the yam may be planted, but usually the heads (*ta ulu*) are kept for the purpose. If the whole yams are used, they are cut into two or more parts. If a long

1: Hocart Y-5 (ca. 1920) 1929 OQ6 Lau OQ6
Lakemba



yam of ordinary size is used, it may be cut across and the lower portion will be cut in two lengthwise. Placed in the mound with the flat inner surface turned up, a portion will produce three to five yams; if planted with the edge up it will produce one yam only, but it will be a larger one; in an intermediate position it may produce two. Two small pieces may be planted in one mound. Sometimes a very large mound is made, the chief yam (*kena tu*) is planted in the middle, and others round the sides. When a yam has been planted a reed is stuck in the mound to show it is occupied. The stalk, or "husk" (*nggana*), is sometimes given a reed to climb on, but generally it is allowed to creep on the ground. The yam that develops, the *uvi vou*, is called *ti* in the early stages.

The method thus described is the usual one and is called *lau ngga*, speedy digging. In Lakemba these mounds run into the thousands; in Mbau three hundred is considered a big field; therefore Lakembans who go to the West have a reputation for work; that is simply because they are accumstomed to plant large fields. Many people however have in their fields yams planted according to a method called *keli usu*, or in Tongan *kelikeli malie*, good digging.

A very deep and narrow pit is dug by means of a digging stick. The earth brought up on the end of the stick is laid in one heap if it comes from the top, in another if it comes from below. When the pit is finished they first shovel in and break up the surface soil all round the pit till the pit is almost full; then the earth from the top part of the pit is piled up over it, then the earth from the lower part; the soil is then raked up all round and a mound formed about two feet high. The seed yam is placed inside the mound above the ground level. In Ono, however, they do not make big mounds because they say the sun heats the loose earth and the yam is dried up. If it is laid almost level with the ground the roots go straight into live earth (*nggele mbula*); in a big mound there is no place the roots can lay hold of. In such pits it is necessary to plant a whole yam or a very large part of one.

Planters differ somewhat in their methods: if the yam is thick a pit 18 inches deep is sufficient; some prefer 3 feet.

Ndausinga, an expert planter and my chief informant, says:

It is no good planting such long pieces unless they are slit over a length of about eighteen inches from the base in order that the yam may dry up (*malai*), as it is a moist food plant, and that the juice may come forth, making the yam energetic; but if the set is too big and the water does not come forth cold penetrates the yam and reaches the head; so does heat; if there is much rain the yam grows badly and the leaves rot (*karatha*); if the seed yam is not dried up but remains fresh it is said to be *ngotangota* and the new yam gets diseased; this they know because when they dig up wild yams leaving a set, if the first yam was large the second will not be so because the set is moist; it is bad for the moisture of the set to reach the new yam. The new yam grows downwards and follows the pit as the soil in it is loose. It lies with us to regulate the shape of the yam; if we want it to have a good shape the soil in the pit is well broken up; if a clod as long as the joint of a finger is left the yam will press against it and that part will have a depression because the water of the yam goes first and the new yam follows. In Tonga, the land of origin of this

1: Hocart Y-5 (ca. 1920) 1929 OQ6 Lau OQ6
Lakemba



214

method, they dig up another hole with soft soil and put this soil into the pit; that is why they proceed fast with these pits, whereas Fijians break up clods and so go slowly. Not all yams can be used in this method, only *kaumaile* and the four *kasokaso* mentioned. *Kasokaso* should not be planted later than August. *Kaumaile* will grow to a good size if planted as late as October, for its tuber is fast.

Yams planted in this way are intended for shows and competitions, for they reach a length of six feet or more; I have heard of a yam in Tonga nine feet long. But the return is not in proportion to the labor, the size of the seed yam or the space occupied; for it is necessary to leave a clear interval of some sixteen feet between this mound and the next because the strength of the leaves begins on the mound but gets weak at that distance. If the yams are planted too close together, the place is overshadowed because a good set puts forth a lot of leaves. If a yam has too many leaves which cover the mound it will not grow big because it is cold; it is no use cutting off the leaves. That is why a land exposed to the sun is preferred for such pits because it prevents an excessive growth of leaves. If more shoots than one appear there will be more than one yam and they will be smaller; all shoots are therefore broken off except one. Energetic planters allow no part of the stalk to rest on the ground, but support it on reeds that no disease may affect it.

Experts often have little tricks of their own. Some put a flat stone at the bottom of the pit to stop the yam; the yam reaches the stone and its strength goes up again so that the head sometimes appears above the ground. This is done when the length is sufficient for a competition and it is desired to make it thick as well; for the strength goes up to fill in the yam. Maikeli used to place the seed yam over a shallow pit; when the stalk was long and the roots about a hand long he dug it up carefully, so as not to tear the roots, put a stick underneath it to hold it off the ground and dug a pit down very deep and buried the set over it. This is a Tongan method called *fakaeua;* yams so treated never fail to be long, but very few Fijians can do it because it requires skill and they have pity on the yams. Some uncover the yam when it has taken root and cut off all but a small piece of the set because it is of no use once the yam has taken root; the reason is the same as that for slitting the yam. Maikeli used to water his yams before sunrise and after sunset everyday; after watering he would cover the mound with leaves lest the water become too hot and the yams rot (*karatha*); if the mound is covered the heat is suitably moderate.

If the *wanu* or the *kaumaile* flower they know no other yam will beat it. The planter is in constant expectation of its flowering. If it is reported that the yam in such and such a place is flowering, every one knows it will be the longest and the others give themselves up for beaten at the competition.

Vola told me that Ratu Mara treated his yams to make them big by laying certain broad leaves on them; that year the yams were of a good size, but Melaia, Mara's sister, declares that all such charms are intended to kill, to make them rot in the earth and leave the soil incapable of bearing again; there are no charms to make the yams big; their growth comes

1: Hocart Y-5 (ca. 1920) 1929 OQ6 Lau OQ6
Lakemba



as a surprise. To guard against witchcraft red *reiva* (*reivandamu*) and horse taro are planted on the borders of the field. In Lomaloma *lata* is planted against "raw eyes"; if a person with "raw eyes" sees yams they will not grow well.

A yam field should not be visited after rain, the reason being if legs or hands touch the leaves when wet, they will become *karatha* because water remains in yam leaves. Leaves, when *karatha*, look burnt, fade, and drop.

The crop depends on the weather. If there is too much rain the ground is cold so that the yams do not penetrate far. If there is sunshine till Christmas the interior of the pit is warm and the yams do well. If there is a prolonged drought, yams that are planted early do not come to much because the sun eats up their strength; the yams planted later retain their strength.

When Orion is in the west the yams are mature. Early yams come in in January if there is plenty of rain; but they are few. As the last year's stock is exhausted the young men are sometimes sent to the fields in January to get immature yams for feasts. They dig them up when the bottom is still white, cut it off, leaving about one hand's length and cover up the heads again; these heads produce long yams that very same season. This process is called *vakarcte*. The bulk of the crop comes in about March and April, months known as digging months (*vula ikelikeli*). First yams for immediate needs are dug. When the yams have definitely ceased growing they are stored in little huts next to the plantation and called *lolo*.

Sometimes yams are planted two years running in the same field. This is called *lothi*. In that case they must be planted in June or July. They do not yield much. Usually yams are succeeded by sweet potatoes, bananas, or some other crop. Sometimes bananas are planted in a field of yams immediately after the yams have been put in; being small, the trees do not injure the yams. After sweet potatoes or other crops the land is allowed to lie fallow (*voavoa*).

Wild yams are called *tikau* and are eaten, except the poisonous kind.

Sweet yams (*Dioscurea aculeata*) are called *kawai*. They are not planted in Lakemba and are not esteemed. They are abundant in the bush and people sometimes come from the Southern Islands and beg leave to dig them up. They are generally fibrous and not to be compared to those cultivated.

### Taro Planting

Taro is not planted on so large a scale as are yams, but is more esteemed. Only wet taro fields are cultivated in Lau, and these by irrigation along the streams. Such land is called *solove*. Swiftly running streams are most

1: Hocart Y-5 (ca. 1920) 1929 OQ6 Lau OQ6
Lakemba



desirable, for sluggish water becomes hot and wilts the plants. The irrigation consists in dipping water from the stream with coconut shells attached to a stick, or flooding the fields by turning the course of the stream.

Formerly there were two kinds of taro fields: those cultivated by the *mbiti* method and those by the *lauvoro*. The *mbiti* method is now discontinued because it involves too much time and labor. It was described to me as follows:

> In a *mbiti* the grass is cut, fired, and the rubbish removed so that the soil appears; the body of the soil (*yango ni nggele*) is dug thoroughly; then conical holes are made with a special digging stick, which has a head like that of a javelin reed or an European gun shell; some of the heads were as thick as the post of a house. The pits thus made were as deep as four feet. The patches were encased in earth walls surrounded by ditches. Taro raised by this method grew as high as six feet, with tubers eighteen inches long.

By the *lauvoro* method the grass is cut and the taro planted in the midst of the rubbish; the holes being made with a pole (*i pasa*) (Pl. II, *A*) which broadens at its lower end, narrowing to a point; the blade is flat on one side and slightly convex on the other, making small conical holes.

Both cuttings and suckers are planted. In planting cuttings, the top of the root is removed with the stem, the leaves removed also. There is no special season for planting taro, although certain times seem to be more productive than others. For instance, taro maturing in November and December, when it is most needed because of yam stortage during these months, has an unpleasant flavor and develops an abundance of suckers. Occasional weeding is necessary until maturity, when it becomes harmful. In the days of the late Tui Naiau, huge taro fields still extended from the back of Tumbou to the foot of Kendekende; now only the upper part is properly cultivated, the work being done mostly in the evening.

## Sugar Cane Growing

Sugar cane is planted in clumps here and there, in the villages or in the fields, merely for use in puddings. A charm is used to drive away the *kitu*, a small bird which eats the sugar-cane and plantains. The owner of the charm rubs certain leaves in his hands and points to a distant spot. The birds then fly to the place indicated.

Sugar cane, *nggai* (*Dracaena terminalis*), supplies a thick juicy root which is cooked in hot stones for three days, producing a substance which tastes like licorice. Such ovens are not often made as they are large and require that the stones be heated all night.